

REMARKS

Claims are now pending in the application. Applicant would like to thank the Examiner for the thorough consideration given to the present application and the courtesies extended to applicant's representative during a telephone interview on December 20, 2005. During the interview, the Examiner explained his interpretation of the relied upon reference. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-6, 9, 10 and 21 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,778,778 (Richard). This rejection is respectfully traversed.

Applicant's invention is directed generally to a network diagnostic system for an optical transport network. The diagnostic system is characterized by the use of on-board optical and electronic test equipment that is directly integrated into the network elements residing in the optical network. The diagnostic system then employs a cost effective mechanism for initiating diagnostic operations at each of these network elements. For example, a request to initiate a diagnostic operation may be sent from a remote diagnostic device to an intermediary network element residing in the optical transport network. The intermediary network element in turn maps the request into an optical network frame and transmits the optical frame over an optical supervisory channel to the intended network element. The requested network diagnostic operation is initiated upon receipt of the request at the intended network element. In this way, the remote diagnostic device can initiate a diagnostic operation at any of the network

elements using a single connection to only one of the network elements. As a result, Applicant's invention avoids the added expense of an overlay network which would be needed to communicate with each of the elements of the optical transport network.

Richards is also directed to an arrangement for testing a telecommunications circuit. Briefly, a transmitter 12 is optically coupled to the DWDM circuit 16 and transmits a test-drive signal on the circuit. Performance of the circuit is monitored at points along the network based on the transmitted test-drive signal. To do so, Richards employs an overlay network 24 (e.g., see col. 5, lines 24-42). In this approach, there is a communication link between the network 24 and each of the network elements 56, 58, 60 as shown in Figure 1. It is noted that this communication link is external to the DWDM circuit 16. Thus, Richards fails to teach or suggest as a network diagnostic system where diagnostic requests and other information is communicated amongst the network elements using optical frames transmitted over an optical supervisory channel of the optical network as recited in Applicant's claimed invention.

With reference to the Office Action, the display device 62, the transmitter 12 and the network 24 in Richards are construed to be the network diagnostic device, the first network element and the second network element, respectively, as recited in the pending claims. In accordance with this interpretation, network 24 in Richards should receive a request from the display device 62, map the request into an optical network frame and transmit the optical network frame over an optical supervisory channel of an optical transport network to the transmitter. Applicant asserts this interpretation of Richards fails to anticipate the claimed invention of the present application.

First, Applicant does not concede that the display device 62 is not able to initiate a diagnostic operation by the transmitter 12. With reference to col. 6, lines 6-7, the test-

drive signal is activated by the field technician pressing the laser power actuator on the transmitter. Thus, the display device 62 is used to monitor performance of the network elements, but not to initiate any diagnostic operation at the transmitter 12.

Moreover, network 24 fails to map a request into an optical network frame and transmit the optical network frame as recited in Applicant's claimed invention. Network 24 operates under an Ethernet communications protocol as noted at col. 5, lines 32-33. This Ethernet network is clearly distinct from the optical network which is designated as DWDM circuit 16. To the extent that a request could be sent from the display device 62 to the transmitter 12, Richards merely discloses that this request is carried entirely over an Ethernet network. With reference to col. 6, lines 48-61, the Examiner claims that network 24 can be construed as an optical network. However, put in its proper context, alternative embodiments suggested by this paragraph are not meant to apply to network 24, but to DWDM circuit 16. Accordingly, Richards fails to teach or suggest that such a request would be mapped to an optical frame prior to reaching the transmitter as asserted by the Examiner.

As previously noted, Claim 1 recites a "second network element adapted to receive a request to initiate the network diagnostic operation from the network diagnostic device, [where] the second element operable to map the request into at least one optical network frame and transmit the optical network frame over an optical supervisory channel of the optical transport network to the first network element" in combination with other elements of the claim. Applicant notes that "operable to map" positively recites a function performed by the second network element and is not an intended use of this element as asserted by the Examiner. Since this aspect of the

present invention is not disclosed by Richards, it is respectfully submitted that Claim 1 defines patentable subject matter over Richards.

In an exemplary embodiment of the present invention, the request is sent from the network diagnostic device over an Ethernet network to the second network element. Therefore, the second network element maps the Ethernet frames to the optical network frames as recited in Claim 9; whereas, the first network element extracts the Ethernet frames form the optical network frames as recited in Claim 10. For the same reasons as discussed above, Richards fails to teach this aspect of the present invention. Therefore, the Examiners attention is also drawn to these pending claims. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this rejection.

REJECTION UNDER 35 U.S.C. § 103

Claims 7, 11-20, 22-31 and 33-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Richards. This rejection is respectfully traversed.

Applicant notes that independent Claim 21 recites subject matter similar to Claim 1, and thus should be allowable, along with claims depending therefrom, for the same reasons as Claim 1. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this rejection.

With regard to independent Claims 34-36, these claims are directed generally to data records for communicating network performance data. The Examiner concedes that Richards fails to disclose the particular diagnostic operations associated with these data records. The Examiner then asserts that such diagnostic operations are known in the art. Applicant does not concede this point. Nonetheless, even if the Examiner is correct, this mere assertion is insufficient to reject the pending claims. These claims recite a particular

data structure for a data record. What type of data to include in the data record is not common knowledge and thus Applicant requests that the Examiner provide documentary evidence in support of his assertion. MPEP §2144.03.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

By: 

Timothy D. MacIntyre
Reg. No. 42,824

Dated: December 29, 2005

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600
TDM/drl